

Title (en)
Humidification apparatus

Title (de)
Befeuchtungsvorrichtung

Title (fr)
Appareil d'humidification

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Application
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Abstract (en)
A humidifier and humidity sensor is disclosed for use with a breathing assistance apparatus. The humidity sensor preferably includes means to sense absolute humidity, relative humidity and/or temperature at both the patient end and humidifier end. The humidifier may also include provision to both control independently the humidity and temperature of the gases. Further, a chamber manifold is disclosed to facilitate easy connection of the humidifier to various outlets, inlets and sensors. A heated conduit is described which provides a more effective temperature profile along its length.

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Citation (search report)
• [XY] US 5529060 A 19960625 - SALMON ANDREW P M [NZ], et al
• [XY] JP H09234247 A 19970909 - NIKKISO Y S I KK
• [XY] JP H05317428 A 19931203 - OTSUKA MASAHIRO, et al
• [X] WO 9826826 A1 19980625 - COOK WILLIAM A AUSTRALIA [AU]
• [X] US 5392770 A 19950228 - CLAWSON BURRELL E [US], et al
• [Y] US 4574188 A 19860304 - MIDGLEY JOHN A [US], et al
• [Y] GB 1167551 A 19691015 - TEXAS INSTRUMENTS INC [US]
• [Y] DE 4034611 A1 19920507 - STIEBEL ELTRON GMBH & CO KG [DE]
• [Y] EP 0672430 A2 19950920 - FISHER & PAYKEL [NZ]
• [A] EP 0258928 A1 19880309 - PONNET GILMAN EN ANTHONY [BE]

Cited by
CN104888330A; EP3166671A4

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DOCDB simple family (publication)
EP 1138341 A2 20011004; EP 1138341 A3 20030813; EP 1138341 B1 20060628; AT E331553 T1 20060715; AT E352340 T1 20070215; AT E398473 T1 20080715; AT E465766 T1 20100515; AU 2810401 A 20010927; AU 784172 B2 20060216; CA 2341151 A1 20010921; CA 2341151 C 20090602; CA 2616691 A1 20010921; CA 2616691 C 20120103; CA 2617228 A1 20010921; CA 2617228 C 20121009; CA 2617234 A1 20010921; CA 2617234 C 20111220; CN 101972507 A 20110216; CN 101972507 B 20120725; CN 102580219 A 20120718; CN 102580219 B 20140917; CN 1175913 C 20041117; CN 1314192 A 20010926; CN 1623612 A 20050608; CN 1623612 B 20100602; DE 60121083 D1 20060810; DE 60121083 T2 20061221; DE 60126365 D1 20070315; DE 60126365 T2 20071115; DE 60134505 D1 20080731; DE 60141995 D1 20100610; EP 1522326 A1 20050413; EP 1522326 B1 20070124; EP 1681072 A2 20060719; EP 1681072 A3 20060802; EP 1681072 B1 20080618; EP 1790370 A1 20070530; EP 1790371 A2 20070530; EP 1790371 A3 20070613; EP 1790371 B1 20100428; ES 2266038 T3 20070301; ES 2280890 T3 20070916; HK 1089115 A1 20061124; JP 2001314508 A 20011113; JP 2005177521 A 20050707; JP 2008161712 A 20080717; JP 2008183413 A 20080814; JP 2012081287 A 20120426; JP 4386595 B2 20091216; JP 4966504 B2 20120704; JP 4977070 B2 20120718; JP 5501327 B2 20140521; US 10525225 B2 20200107; US 2001050080 A1 20011213; US 2004074493 A1 20040422; US 2007051368 A1 20070308; US 2013081619 A1 20130404; US 2015090260 A1 20150402; US 2017095637 A1 20170406; US 6918389 B2 20050719; US 7146979 B2 20061212; US 8235041 B2 20120807; US 9555210 B2 20170131; US 9750917 B2 20170905

DOCDB simple family (application)
EP 01106827 A 20010319; AT 01106827 T 20010319; AT 04028254 T 20010319; AT 06006595 T 20010319; AT 07001892 T 20010319; AU 2810401 A 20010320; CA 2341151 A 20010321; CA 2616691 A 20010321; CA 2617228 A 20010321; CA 2617234 A 20010321; CN 01109868 A 20010320; CN 200410092530 A 20010320; CN 201010124852 A 20010320; CN 201210017282 A 20010320; DE 60121083 T 20010319; DE 60126365 T 20010319; DE 60134505 T 20010319; DE 60141995 T 20010319; EP 04028254 A 20010319; EP 06006595 A 20010319; EP 07001891 A 20010319; EP 07001892 A 20010319; ES 01106827 T 20010319; ES 04028254 T 20010319; HK 06108798 A 20060808; JP 2001080949 A 20010321; JP 2005073347 A 20050315; JP 2008071173 A 20080319; JP 2008071174 A 20080319; JP 2011266229 A 20111205; US 201213540357 A 20120702; US 201414562385 A 20141205; US 201615376538 A 20161212; US 55479206 A 20061031; US 68646003 A 20031015; US 80856701 A 20010314